Homelessness and Mental Health

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2018

document version
Publisher's PDF, also known as Version of record

Chapter 5. Predictors of homelessness among women with serious mental disorders accessing outpatient clinics in The Banyan, Tamil Nadu

Abstract

Importance:

Mental illness provides an additional burden to homelessness which by itself has a number of well documented harmful effects. Hence, to identify and address the factors leading homelessness within the population of women with mental illness is imperative to inform policy to provide relevant services for this vulnerable population.

Objective:

Homelessness has multifaceted and deleterious effects on women with mental illness. The authors sought to understand lifetime prevalence of and factors associated with homelessness among women with serious mental disorders accessing outpatient clinics run by a not-for-profit organisation in India.

Design:

It is a cross-sectional study undertaken from December 2015 to March 2016.

Setting:

Interviews were conducted across four clinics (urban and rural) of The Banyan.

Participants:

485 women were identified as potential participants at the start of the study, of whom 346 women with mental illness, above 15 years of age, from low-income backgrounds and in active service contact participated in this study. 22 declined to participate, and we were unable to elicit consent from 30 women who were highly symptomatic at the time of the study. 87 women could not be contacted.

Methods:
The study cross-sectionally surveyed 346 women in active service contact across four clinics of The Banyan. Multivariate logistic regression analysis was used to examine predictor variables for homelessness among women with mental illness.
Main Outcome and Measures:
The primary goal of the study was to explore the factors leading to homelessness within the outpatient population of The Banyan in order to potentially identify and create strategies to prevent homelessness.
Results:
32.65% of participants reported history of homelessness. Less than five years of schooling (OR=2.914, 95% CI=1.027-8.269, $p<0.05$) and disruptions in relationships (OR=1.807, 95% CI=1.23-2.655, $p<0.01$) were associated with higher odds of becoming homelessness among women with mental illness.
Conclusions and Relevance:
Factors rooted in gender-based disadvantage predominantly explained homelessness among women with mental illness in the study cohort. Further practice and research are needed to unpack interventions that address issues with a sociological basis concomitant to mental illness and prevent these predictive factors.

Background

The co-occurrence of homelessness with mental illness is a significant problem representing an intractable double jeopardy. With lower quality of life outcomes, longer duration and repeated episodes of homelessness and higher health and social deprivations, complex service responses are often required for this population (Kuhn & Culhane, 1998). Several studies conducted in the West reveal higher prevalence of mental disorders, both severe and persistent as well as mood disorders, among homeless people when compared with a matched general population. A 2008 meta-analysis of surveys in Western countries, estimated a pooled prevalence rate of 12.7% for psychotic disorders in the homeless population (Fazel, Khosla, Doll, & Geddes, 2008). In the case of severe and persistent mental disorders, homelessness represents an outcome (Chamberlain & Johnson, 2013), with poverty facilitating the relationship between mental illness and social

problems (Draine, Salzer, Culhane, & Hadley, 2002; Funk, Drew, & Knapp, 2012). Prevalence of homelessness among people treated for a mental health problem over a one-year period was found to be as high as 15% and significantly associated with diagnosis of schizophrenia or bipolar disorder and lack of Medicaid among other factors such as male gender and African American ethnicity (Folsom et al., 2005).

Similar research on homeless people with mental illness in India is lacking, although the urban landscape of the country particularly holds a strong witness to this phenomenon. In India, 150 million people are estimated to be suffering from mental illness (Gururaj et al., 2016), while estimates for homelessness range from 1.8-78 million ("Houseless, Population without homes - Census 2011 India," 2011). Pervasive poverty and its many disadvantages in the face of dismal public mental health and poverty alleviation systems, interact in a vicious cycle and distances those affected from pathways to recovery (Gopikumar, Narasimhan, Easwaran, Bunders, & Parasuraman, 2015). The impact of poverty and ill health in the absence of a responsive health system may be central to perpetuating conditions of homelessness among those with severe and persistent mental illness (Gopikumar, Narasimhan, Easwaran, Bunders, & Parasuraman, 2015). Much of the evidence on risk factors for homelessness among those with mental illness is primarily from the West. Poverty, childhood instability and violence, service inaccessibility, family disorganization, family support, illness characteristics and substance abuse have been found to be associated with homelessness among those with mental illness (Caton et al., 1995, 1994; Sullivan, Burnam, & Koegel, 2000). While male gender is found to be more associated with homelessness,[6] homeless women face unique detriments on account of their gender in addition to cross-cutting disadvantages. In addition to increased vulnerability to violence, sexual abuse and sexually transmitted diseases (Goodman et al., 2001), women may also bear the burden of raising children on the streets (Buckner, Bassuk, & Zima, 1993).

The paucity of research in the Indian context, despite several decades of work by organisations within the country, limits the ability to inform policy and advocate for more meaningful service options. The proposed study is placed in the context of the work of The Banyan, a not for profit organisation

established in 1993 to address the needs of homeless women with mental illness. The organisation has since then grown to include comprehensive clinical and social care services in both institutional and community settings. Anecdotal evidence from the experiences of the organisation indicates factors beyond income-based poverty, severity of illness and service inaccessibility in influencing homelessness. History of homelessness among The Banyan's clientele with primarily psychotic symptoms and low-income backgrounds at rural and urban outpatient clinics have thus far not been explored. Why do some women with mental illness experience homelessness? What distinguishes this group from a similar group of never homeless women who also experience mental illness and poverty? What are the factors that put some women with mental illness at higher risk of homelessness? The object of exploring the roots of the phenomenon of homelessness among those with mental illness has potential implications for the design of preventive strategies and interventions that may mitigate the recurring toll that this exacts on the lives of people.

Methods

The study adopted a cross-sectional design with a primary survey of women attending outpatient clinics of The Banyan. The sample was drawn from women attending urban and rural clinics. We aimed to survey women with a diagnosis of mental illness (schizophrenia, psychosis nos, bipolar disorder, depression, anxiety disorder) accessing The Banyan's outpatient clinics. 688 women were in active service contact, as on September 2015 at the start of the study, across four clinics (three urban clinics and one rural clinic) defined as attending the clinic as on date of appointment within the preceding quarter (maximum duration between two subsequent appointments at clinics). We excluded 203 women (195 with intellectual disability, 5 with hearing and speech disability and 3 with dementia) from the sample. 485 women were identified as potential participants for the study. 346 women consented to participate and were included in the final sample surveyed. We were unable to elicit consent from 30 women who were highly symptomatic at the time of the study, 22 declined to participate, and we were unable to establish contact with 87 women.

Measures

A semi-structured instrument was used to elicit information on socio-demographic characteristics of participants and their households, prevalence and course of homelessness and course of illness. The modified version of the List of Threatening Experiences Questionnaire (LTE-Q) (Brugha & Cragg, 1990) that has items with dichotomous responses (yes/no) was used to record lifetime prevalence of critical events among the participants. The LTE-Q has been used in several studies with the homeless population and is found to be useful in mental health to distinguish associations of ill-health and homelessness with psychosocial stressors (Motrico et al., 2013). Ten additional items suggested by local experts with over twenty years of clinical practice with the population were added to the original list of 12 items in LTE-Q. The interview schedule and modified LTE-Q were translated in the local language and back-translated into English by two bilingual experts. Discrepancies between the original interview schedule and the forward translation were resolved. Changes to some words and expressions were made keeping in mind cultural equivalence so that items retained their intended meaning. The interview schedule was piloted with women with mental illness accessing the outpatient clinic (n=18). Debriefs with interviewees and interviewers were carried out to discern any confusing or difficult words or expressions. Adjustments were made based on the summary of these debriefs, and a final version of the interview schedule was prepared.

Data Collection and Analysis

Two Research Associates with Masters level training in social work were trained and gathered data through face to face interviews with women over a period of four months from December 2015 to March 2016. Data were analysed using SPSS 22 and R 3.5. R was primarily used to perform tetrachoric factor analysis for the LTE-Q which has items with dichotomous responses. Descriptive statistics were used to examine the data initially. Continuous variables were tested for normality using Q-Q plots. Differences between background characteristics of those who had a lifetime prevalence of homelessness and those without were examined using t-tests/Mann Whitney U for continuous variables and chi-square test for categorical variables.

Exploratory Factor Analysis (EFA) using tetrachoric correlations was run in R on the modified LTE-Q, a 22-question assessment determining prevalence of stressful life events in the participant's past. The Kaiser-Meyer-Olkin measure of factor adequacy was 0.62. The EFA revealed eight factors with an eigenvalue greater than one. However, the scree plot indicated that three factors should be retained. Therefore, three factors with nine items were retained, as seen in Table 1. A varimax orthogonal rotation was employed. The Tucker-Lewis Index of factoring reliability was 0.936. The items with correlation coefficients greater than 0.4 were consistent with a theme within each factor. There were 3 items with moderate to strong factor loadings associated with disruptions in relationships (factor 1), 3 items related to socio-economic difficulties (factor 2) and 2 items loaded on factor 3 encompassing mental health and treatment difficulties.

Multivariate logistic regression was performed to examine the effects of Factor 1 Disruption in relationships, education, age, caste, prevalence of wandering, and diagnosis on the odds of becoming homeless. The variables were entered into the model in a single step, and the odds ratios were computed in SPSS 22. Odds ratios were considered statistically significant when the p-value was <0.05. Factor 2 Socioeconomic difficulties and Factor 3 Mental Health and Treatment were included in the initial analysis and did not contribute to the model, their removal did not affect other variables in the model and therefore were not included in the final analysis.

Ethics and Consent

The study proposal was reviewed and approved by The Banyan's Research Review Board (RRB). Participants were informed about the purpose of research in addition to their right to confidentiality and refusal with regards to responding to any or all questionnaire items. Informed consent was obtained from all participants prior to the interview. Raw data for analysis eliminated any personally identifying information.

Table 5.1. Factor Analysis of modified LTE-Q - Rotated Matrix[a]			
Items	Factor 1	Factor 2	Factor 3
Breaking of a steady relationship	0.847		
Abandonment	0.801		
Separation due to marital difficulties	0.647		
Lack of living in proper housing		0.601	
Unemployment or seeking work unsuccessfully for more than 1 month		0.531	
Major financial crisis		0.481	
Death of parent, partner or child		0.467	
Poor treatment adherence			0.662
Experiencing chronic and severe symptoms of mental illness			0.617
Proportion of Variance (%)	48	28	24
Cumulative Proportion of Variance (%)	48	76	100
Extraction Method: Minimum Residual Criterion			
Rotation Method: Varimax with Kaiser Normalization.[a]			

Results

Characteristics

32.65% of survey participants reported one or more episodes of homelessness in their lifetime. The socio-demographic characteristics of the 346 participants are presented in Table 2 in two groups – participants who experienced homelessness (N=113) and participants who have not (N=233). 48% of the participants had a diagnosis of Schizophrenia, 22% with a Depression/Anxiety/Seizure disorder, 15% with Psychosis NOS and 14% Bipolar Disorder. There was a statistically significant difference in diagnosis between the two groups in the direction that a greater proportion of those who have experienced homelessness has serious mental disorders and those who have not, $\chi 2 = 14.139$, $df = 3$, $p<0.003$.

Table 5.2.Socio-demographic characteristics of homeless and never homeless population (N=346)							
Characteristics	**Homeless History (N=113)**		**Never Homeless (N=233)**		**Analysis**		
	N	**%**	**N**	**%**	**χ2**	**df**	**p**
Diagnosis					14.139	3	0.003
Schizophrenia	63	55.8	104	44.6			
Psychosis NOS	17	15.0	35	15.0			
Bipolar Disorder	21	18.6	29	12.4			
Common Mental Disorder	12	10.6	65	27.9			
Marital Status					10.28	3	0.016
Single	14	12.4	44	18.9			
Married	38	33.6	105	45.1			
Separated	31	27.4	45	19.3			
Widowed	30	26.5	39	16.7			
Religion [a]					0.632	2	0.729
Hindu	84	75.0	181	77.7			
Muslim	9	8.0	20	8.6			
Christian	19	17.0	33	13.7			
Caste [a]					9.945	3	0.019
Scheduled Caste/ Tribe	37	34.6	46	20.4			
Most Backward Classes	18	16.8	59	26.1			
Backward Classes	43	40.2	107	47.3			
Forward Caste	9	8.4	14	6.2			
Education					22.604	3	0.0001
Less than 5 years	58	51.3	67	28.8			
6 to 8 years	14	12.4	51	21.9			
9 to 10 years	27	23.9	50	21.5			
Over 10 years	14	12.4	65	27.9			
Prevalence of wandering					133.025	1	0.0001
Prevalent	113	100.0	80	34.3			
Not prevalent	0	0.0	153	65.7			

Characteristics	Homeless History (N=113)		Never Homeless (N=233)		Analysis		
	N	**%**	**N**	**%**	**χ2**	**df**	**p**
Access treatment at onset of mental illness					1.441	1	0.23
Yes	101	89.4	217	93.1			
No	12	10.6	16	6.9			
	M	**SD**	**M**	**SD**	**t**	**df**	**p**
Age	43.37	11.647	40.68	11.647	1.961	344	0.051
Age at onset of mental illness [a]	27.09	10.671	30.84	13.585	-2.537	241.712	0.012
Current caregiver age [a]	49.54	15.670	47.56	14.166	1.171	338	0.242
Total number of stressful life events	0.16	1.760	2.46	1.621	-4.103	344	0.0001
	Mdn	**IQR**	**Mdn**	**IQR**	**U**	**Z**	**p**
Household income in Indian Rupees [a]	8000	7625	10000	10000	11820.5	-1.423	0.155
factor 1 - Disruption in relationships	0	2	0	1	10633.5	-3.404	0.001
factor 2 - Socio-economic difficulties	2	2	2	4	11609.0	-1.831	0.067
factor 3 - Mental health and treatment difficulties	0	0	0	0	12557.0	-1.025	0.305

[a] Religion - N = 112 for homeless antecedent; Caste - N = 107 for homeless antecedent, N = 226 for never homeless; Age at onset of mental illness - N = 98 for homeless antecedent, N = 180 for never homeless; Current caregiver age - N = 112 for homeless antecedent, N = 228 for never homeless; Household income in Indian Rupees - N = 78 for homeless antecedent, N = 132 for never homeless

[b] factor 1 - Disruption in relationships - Breaking up of a steady relationship, abandonment, separation due to marital difficulties; factor 2 - Socio-economic difficulties - Lack of living in proper housing, unemployment or seeking work unsuccessfully, major financial crisis, death of a parent, partner or child; factor 3 - Mental health and treatment - poor treatment adherence, experiencing chronic and severe symptoms of mental illness

The average age of those who experienced homelessness in their lifetime was 43.37 with 38 (33.6%) married, 31 (27.4%) separated or divorced, 30 (26.5%) widowed and 14 (12.4%) single and the average age of those that did not experience homelessness was 40.68 (11.647) with 105 (45.1%) married, 45 (19.3%) separated or divorced, 44 (18.9%) single and 39 (16.7%) widowed. A statistically significant association between marital status and homelessness prevalence was observed between the two groups, $\chi 2 = 10.28$, df = 3, $p<0.016$. A little more than half (58 out of 113, 51.3%) of the population that experienced homelessness, attained between one to five years of education or no education at all, as opposed to 67 out of 233 (28.8%) of those who never experience homelessness, $\chi 2 = 22.604$, df = 3, $p<0.0001$. Over 90% of the participants in both groups belonged to backward or most backward classes (experienced homelessness, N = 61, 57%; never experienced homelessness, N = 166, 73.5%), or from scheduled caste or scheduled tribe (experienced homelessness, 37, 34.6%; never experienced homelessness, 46, 20.4%). A statistically significant difference was observed between the two groups and caste, $\chi 2 = 9.945$, df = 3, $p<0.019$. All the participants who experienced homelessness in their lifetime also stated the prevalence of wandering in the past (N = 113, 100%) whereas 80 (34.3%) of the participants who never experienced homelessness stated prevalence of wandering.

The participants were assessed to determine any past stressful life events and it was determined that the average number of stressful life events reported by the participants who experienced homelessness (M = 3.16, SD = 1.760) was 1.3 times more than those that never experienced homelessness (M = 2.46, SD = 2.459) with a statistically significant difference in mean, t = 3.661, df = 344, $p<0.0001$. Factor 1 (Disruption in Relationships) showed significant difference between the population that experienced homelessness (Mdn = 0, IQR =2) and those that never experienced homelessness (Mdn = 0, IQR = 1), U=10633, z = -3.404, $p<0.001$.

Factors predicting homelessness

Multivariate logistic regression was performed to determine the effects of wandering, diagnosis, disruption in relationships (factor 1) and education while controlling for age and caste on the likelihood that participants become homeless. This regression model was statistically significant, $\chi 2 = 209.257$, df = 12, $p<0.0001$. The model explained 65.2% (Nagelkerke R^2) of the variance in homeless numbers and correctly classified 86.2% of the cases. Of the

predictors in the model, disruption in relationships (factor 1), education and age were statistically significant while frequency of wandering, diagnosis and caste did not contribute to the model (Table 3). Increase in number of experiences in disruption of relationships increases the likelihood of becoming homeless by a factor of 1.8. Participants who had less than five years of schooling have 2.9 times higher odds of becoming homeless than those who with 11 or more years of education. Older participants were more likely to have experienced homelessness with odds of 1.04.

Discussion

Present investigation examines the factors underlying homelessness among women with mental illness. The study compared cohorts of women accessing outpatient services with and without history of homelessness to reveal the gendered nature of homelessness among women with mental illness, with higher risks being associated with disruption with proximal relationships and low educational attainment. The findings cast the experience of homelessness among women with mental illness as a phenomenon that manifests beyond the clinical interpretations of symptomatic incidence owing to lack of treatment or undertreatment. Most of the women who experienced homelessness in the study's cohort had accessed prior treatment, but despite this found themselves in the precarious situation of being on the streets. In this sample of women from predominantly low-income households, relationships with homelessness have been uncovered with variables besides income-based poverty. The association of social factors rooted in gender-based discrimination with homelessness in the population of interest lends support to the premise that treatment options need to not merely focus on symptom reduction but co-opt comprehensive interventions that take into cognisance personal illness narratives and address the sociological basis of mental ill-health.

Relationship disruptions are profoundly grounded in hegemonic patriarchal structures that systematically relegate women to the margins. Domestic violence has been implicated in homelessness among women in several studies which posit the linkage with the need for women to escape violence from spouses, partners or former partners (Gardiner & Cairns, 2002; Tessler, Rosenheck, & Gamache, 2001; Browne & Bassuk, 1997; Baker, Cook, &

Norris, 2003). Literature on the development of women emphasises the overarching relational sense of self among women - an identity that is organised, developed and articulated in the context of significant relationships (Gilligan, 1993; Surrey, 1985). This fundamental connected nature of identity may explain the dissonance and jeopardy women face when threatened with coercion, alienation or disruption in close relationships. According to Herman (1997), basic operations of 'trust, autonomy, initiative, competence, identity, and intimacy' and recovery have to coincide and only then there is hope for self and personal relationships and subsequent recovery (Herman, 2015). In a qualitative study among 13 homeless women with mental illness, which conducted cross-case analyses across five themes conveyed betrayals of trust, graphic or gratuitous nature of traumatic events, anxiety about leaving their immediate surroundings, desire for one's own space, and gender-related stigmatization (Padgett, Hawkins, Abrams, & Davis, 2006) - thereby relaying the need for undoing trauma, developing resilience and restoring status by addressing experiences of trust, betrayal and violence in intimate partner situations. Informed responses may need to accede to the complex interwoven histories especially in the context of the breakdown of relationships. An enabling environment to reflect and process experiences of constant regulation of self, unequal dynamics within partner-spousal relationships and violent victimisation may be necessary for recovery of homeless women with mental illness. Implications for practice further indicate the need for preventive interventions that specifically target girls and adolescents in fostering an empowered sense of identity that helps them define themselves in ways beyond the male-biased societal norms and articulating control over self in relationships.

Educational attainment serves as an important correlate of socioeconomic status and women's decisional participation within households determining access, autonomy and control over a wide variety of resources (Acharya, Bell, Simkhada, van Teijlingen, & Regmi, 2010). This gap in access to schooling may be explained by gender-based discrimination, generational difference in access to education or other factors such as caste and unfavourable geographical variables. Women who faced gender-based discrimination in the form of low educational attainment with less than five years had higher risks of becoming homeless in the study population. The effect of education

remained after accounting for generational and caste differences in education access by controlling for age and caste. Eliminating sex-based differences in education may be an important policy and practice direction to reduce risks of homelessness on account of mental illness. Education may serve as a protective factor for women absorbing social and economic impacts of any interpersonal strife as it may enhance their ability to forge ahead with self-identified pursuits and sustain themselves.

Despite similar economic circumstances indicated by household income, some women experienced more social disadvantage than others. Geographical variances determine multidimensional poverty and manifestation of social disadvantage. Relative deprivation explains the differences in outcomes among individual with similar incomes with diverse experiences of inequality. Inequality across multiple domains leads to the formation of disadvantage and the experience of marginalisation from societal gains. A recent systematic review of literature points to the primacy of inequality and effects in inducing unfavourable health outcomes disproportionately among those who live amidst wider gaps in resources than those who live in homogenous circumstances (Lago et al., 2018). Neighbourhoods with higher income differentials are more prone to poor educational health outcomes among low-income groups along with other disruptive social circumstances such as violence, crime and low-quality sanitation and housing (Payne, 2017). Geographical variances were not recorded and analysed for effects in the present investigation. Future research can focus on the diverse experiences of social disadvantage and their geographical associations in relation to homelessness and gender to inform appropriate redressals for the issue.

The present investigation has its limitations. The cohort examined were drawn from clinics for low-income households run by a not-for-profit organisation in Tamil Nadu, India and therefore generalizability of findings is uncertain. Data, including history of homelessness, were based on participants self-reports. Diagnoses were drawn from clinical records and were assigned by multiple clinicians with no common diagnostic instrument. The cross-sectional design limits temporal observations, and therefore

causality of uncovered factors associated with homelessness may not be directly inferred.

In our study, a sizable proportion of women with mental illness from low-income households were revealed to have history of homelessness. Associated factors of low educational attainment and disruption in relationships were primarily rooted in gender-based disadvantage. Health systems that offer proximal medical care, neglecting women's narratives of enduring social disadvantage, may not be sufficient to prevent homelessness among women with mental illness. Further practice and research are required to focus on understanding how these predictive factors can be arrested from becoming a reality.